

What Works Clearinghouse



Beginning Reading

June 25, 2007

Stepping Stones to Literacy

Program description¹

Stepping Stones to Literacy (SSL) is a supplemental curriculum designed to promote listening, print conventions, phonological awareness, phonemic awareness, and serial processing/rapid naming (quickly naming familiar visual symbols and stimuli such as letters or colors). The program targets kindergarten and older

preschool students considered to be underachieving readers, based on teacher's recommendations, assessments, and systematic screening. Students participate in 10- to 20-minute daily lessons in a small group or individually. The curriculum consists of 25 lessons, for a total of 9–15 hours of instructional time.

Research

Two studies of *Stepping Stones to Literacy* met the What Works Clearinghouse (WWC) evidence standards. The two studies included 120 kindergarten students in 17 elementary schools in the Midwest.² The WWC considers the extent of evidence

for *Stepping Stones to Literacy* to be small for alphabetics. No studies that met WWC evidence standards with or without reservations addressed fluency, comprehension, or general reading achievement.

Effectiveness

Stepping Stones to Literacy was found to have positive effects on student outcomes in the alphabetics domain.

	Alphabetics	Fluency	Comprehension	General reading achievement
Rating of effectiveness	Positive	na	na	na
Improvement index ³	Average: +30 percentile points Range: +14 to +40 percentile points	na	na	na

na = not applicable

1. The descriptive information for this program was obtained from publicly available sources: the program's website (www.steppingstonestoliteracy.com; downloaded March, 2007) and the research literature (Nelson, Benner, & Gonzalez, 2003; Nelson, Stage, Epstein, & Pierce, 2005). The WWC requests developers to review the program description sections for accuracy from their perspective. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review.
2. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.
3. These numbers show the average and range of improvement indices for all findings across the study.

Additional program information⁴

Developer and contact

Developed by J. Ron Nelson, Penny Cooper, and Jorge Gonzalez, *Stepping Stones to Literacy* is distributed by Sopris West. Address: 4093 Specialty Place, Longmont, CO 80504. Email: customerservice@sopriswest.com. Web: www.sopriswest.com. Telephone: (800) 547-6747.

Scope of use

No information on the scope of use or the demographic characteristics of program users is available.

Teaching

Stepping Stones to Literacy (SSL) comprises twenty-five, 10- to 20-minute lessons that supplement the regular reading curriculum. In each lesson, the teacher guides students through four to six sequenced activities to help students master five critical early literacy skill sets: listening, print conventions, phonological awareness, phonemic awareness, and serial processing/rapid naming. Students without deficits or with mild to moderate early

literacy deficits are usually taught in small groups; students with significant early literacy deficits are taught individually. The curriculum includes a lesson book, with a separate section on serial rapid automatic naming activities (where children practice making quick visual-verbal associations of known sets of colors, numbers, and/or letter names in a left-to-right format), and instructional prompts in English and Spanish.

Each of the 25 lessons begins with a set of nursery rhymes and follows with a set of sequenced instructional activities. Teachers use the model-lead-test instructional format. The teacher first models the target skill. Students replicate the example and practice the skill with assistance from the teacher. Teachers monitor student progress and re-teach the skill to students who do not fully master it. Lessons can also be repeated to help students fully master the early literacy skills taught.

Cost

The SSL kit is available from Sopris West for \$223.49, which includes the lesson book and the instructor's guide.

Research

Two studies reviewed by the WWC investigated the effects of *Stepping Stones to Literacy*. Both studies (Nelson, Cooper, & Gonzalez, 2005; Nelson, Stage, Epstein, & Pierce, 2005) were randomized controlled trials that met WWC evidence standards.

The Nelson, Cooper, & Gonzalez (2005) study included 36 kindergarten students from seven schools in a Midwestern city. Students were randomized to intervention and comparison groups. The intervention group received SSL in addition to the regular curriculum used in the schools, *Open Court Reading*. The comparison group received the regular curriculum with no additional supplement.

The Nelson, Stage, Epstein, & Pierce (2005) study included 84 kindergarten students from ten schools in the Midwest.

Students were randomized to intervention and comparison groups. The intervention group received SSL in addition to the regular curriculum used by the schools. The comparison group received the regular curriculum with no additional supplement.

Extent of evidence

The WWC categorizes the extent of evidence in each domain as small or moderate to large (see the [What Works Clearinghouse Extent of Evidence Categorization Scheme](#)). The extent of evidence takes into account the number of studies and the total sample size across the studies that met WWC evidence standards with or without reservations.⁵

4. The descriptive information for this program was obtained from publicly available sources: the program's website (www.steppingstonestoliteracy.com; downloaded March, 2007) and the research literature (Nelson, Benner, & Gonzalez, 2003; Nelson, Stage, Epstein, & Pierce, 2005). The WWC requests developers to review the program description sections for accuracy from their perspective. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review.

5. The Extent of Evidence Categorization was developed to tell readers how much evidence was used to determine the intervention rating, focusing on the number and size of studies. Additional factors associated with a related concept, external validity, such as the students' demographics and the types of settings in which studies took place, are not taken into account for the categorization.

Research (continued)

The WWC considers the extent of evidence for *Stepping Stones to Literacy* to be small for alphabetics. No studies that met WWC evidence standards with or without reservations

addressed fluency, comprehension, or general reading achievement.

Effectiveness Findings

The WWC review of interventions for beginning reading addresses student outcomes in four domains: alphabetics, fluency, comprehension, and general reading achievement. Both studies reviewed for this WWC intervention report addressed outcomes for constructs in the alphabetics domain.⁶

Alphabetics: The Nelson, Benner, & Gonzalez (2005) study findings for alphabetics are based on the performance of SSL students and comparison students on:

- Three measures of phonological awareness (Comprehensive Test of Phonological Processing (CTOPP): Phonological Awareness subtest and Dynamic Indicators of Basic Early Literacy Skills (DIBELS): Phoneme Segmentation Fluency and Initial Sound Fluency subtests).
- One measure of letter knowledge (DIBELS: Letter Naming Fluency subtest).
- One measure of phonics (DIBELS: Nonsense Words Fluency subtest).

The authors found and the WWC confirmed statistically significant positive effects of SSL on all outcomes.

The Nelson, Stage, Epstein, & Pierce (2005) study findings for alphabetics are based on the performance of SSL and comparison students on:

- One measure of phonological awareness (CTOPP: Phonological Awareness subtest).
- One measure of letter knowledge (DIBELS: Letter Naming Fluency subtest).
- Two measures of phonics (Woodcock Reading Mastery Test-Revised: Word Identification and Word Attack subtests).

The authors found and the WWC confirmed statistically significant positive effects of SSL on all outcomes

Rating of effectiveness

The WWC rates the effects of an intervention in a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative. The rating of effectiveness takes into account four factors: the quality of the research design, the statistical significance of the findings,⁷ the size of the difference between participants in the intervention and the comparison conditions, and the consistency in findings across studies (see the [WWC Intervention Rating Scheme](#)).

The WWC found *Stepping Stones to Literacy* to have positive effects for alphabetics

Improvement index

The WWC computes an improvement index for each individual finding. In addition, within each outcome domain, the WWC computes an average improvement index for each study and an average improvement index across studies (see [Technical Details of WWC-Conducted Computations](#)). The improvement

index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement index is based entirely on the size of the effect, regardless of the statistical significance of the effect, the study design, or the

6. For definitions of the domains and constructs, see the [Beginning Reading Protocol](#).

7. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation, see the [WWC Tutorial on Mismatch](#). See the [Technical Details of WWC-Conducted Computations](#) for the formulas the WWC used to calculate the statistical significance. In the case of SSL no corrections for clustering or multiple comparisons were needed.

The WWC found *Stepping Stones to Literacy* to have positive effects for alphabetics *(continued)*

analyses. The improvement index can take on values between –50 and +50, with positive numbers denoting results favorable to the intervention group.

The average improvement index for alphabetics is +30 percentile points across the two studies, with a range of +14 to +40 percentile points across findings.

Summary

The WWC reviewed two studies on SSL. Both studies met the WWC evidence standards. Based on these two studies, the WWC found positive effects in the alphabetics domain. The evidence presented in this report may change as new research emerges.

References

Met WWC evidence standards

Nelson, J. R., Benner, G. J., & Gonzalez, J. (2005). An investigation of the effects of a prereading intervention on the early literacy skills of children at risk of emotional disturbance and reading problems. *Journal of Emotional and Behavioral Disorders*, 13(1), 3–12.

Additional source:

Nelson, J. R., Cooper, P., & Gonzales, J. (2003). *Stepping Stones to Literacy: What Works Clearinghouse submission*. (Available from the Center for At-Risk Children's Services, 202 Barkley Center, Lincoln, NE 68583-0732)
Nelson, J. R., Stage, S. A., Epstein, M. H., & Pierce, C. D. (2005). Effects of a prereading intervention on the literacy and social skills of children. *Exceptional Children*, 72(1), 29–45.

For more information about specific studies and WWC calculations, please see the [WWC Stepping Stones to Literacy Technical Appendices](#).